



Monitoring relay, can be mounted to Contactor 3RT2, Size S00 standard, digitally adjustable Apparent/active current monitoring 1.6-16 A, 20-400 Hz, 3-phase Supply 24-240 V AC/DC 1 change-over contact, 1 semiconductor output for alarm and warning Monitoring for Current overshoot and undershoot Phase failure, Cable break Phase sequence Residual current Blocking current Warning and alarm thresholds with or without fault buffer ON delay 0-99 s Noise pulse suppression 0-30 s Pause after fault 0-300 min Screw connection system

| | |
|--------------------------|--|
| product brand name | SIRIUS |
| product designation | Monitoring relays |
| design of the product | digitally adjustable, 3-phase current monitoring |
| product type designation | 3RR2 |

General technical data

| | |
|--|------------------------|
| size of contactor can be combined company-specific | S00 |
| operating apparent power rated value | 4 VA |
| insulation voltage for overvoltage category III according to IEC 60664 | |
| • with degree of pollution 3 rated value | 690 V |
| surge voltage resistance rated value | 6 kV |
| consumed current at 24 V | 90 mA |
| protection class IP | |
| • on the front | IP20 |
| • of the terminal | IP20 |
| shock resistance | 15g / 11 ms |
| vibration resistance | 10 ... 55 Hz / 0.35 mm |
| mechanical service life (operating cycles) typical | 10 000 000 |
| electrical endurance (operating cycles) at AC-15 at 230 V typical | 100 000 |
| reference code according to IEC 81346-2 | K |
| relative repeat accuracy | 2 % |
| Substance Prohibitance (Date) | 10/01/2009 |

Supply voltage

| | |
|---------------------------------------|--------------|
| type of voltage of the supply voltage | AC/DC |
| supply voltage 1 at AC | |
| • at 50 Hz | 24 ... 240 V |
| • at 60 Hz | 24 ... 240 V |
| supply voltage 1 at DC | 24 ... 240 V |
| supply voltage frequency 1 | 50 ... 60 Hz |

Measuring circuit

| | |
|--|--------------|
| type of current for monitoring | AC |
| adjustable current response value current | |
| • 1 | 1.6 ... 16 A |
| • 2 | 1.6 ... 16 A |
| adjustable response delay time | |
| • when starting | 0 ... 99 s |
| • with lower or upper limit violation | 0 ... 30 s |
| adjustable switching hysteresis for measured current value | 0.1 ... 3 A |
| accuracy of digital display | +/-1 digit |

Precision

| | |
|---|--|
| temperature drift per °C | 0.1 %/°C |
| Short-circuit protection | |
| design of the fuse link for short-circuit protection of the auxiliary switch required | fuse gG: 4 A |
| Communication/ Protocol | |
| protocol is supported IO-Link protocol | No |
| type of voltage supply via input/output link master | No |
| Auxiliary circuit | |
| number of CO contacts | 1 |
| • for auxiliary contacts | |
| operational current of auxiliary contacts at AC-15 | |
| • at 24 V | 3 A |
| • at 230 V | 3 A |
| • at 400 V | 3 A |
| operational current of auxiliary contacts at DC-13 | |
| • at 24 V | 1 A |
| • at 125 V | 0.2 A |
| • at 250 V | 0.1 A |
| contact rating of auxiliary contacts according to UL | B300 / R300 |
| Main circuit | |
| operating power rated value | 2.5 W |
| ampacity of the semiconductor output at AC-14 at 240 V at 50/60 Hz | 20 mA |
| ampacity of the semiconductor output at DC-13 at 240 V | 20 mA |
| ampacity of the semiconductor output in SIO mode | 20 mA |
| operational current at 17 V minimum | 5 mA |
| Electromagnetic compatibility | |
| EMC emitted interference according to IEC 60947-1 | ambience A (industrial sector) |
| EMC immunity according to IEC 60947-1 | ambience A (industrial sector) |
| Connections/ Terminals | |
| product component removable terminal for main circuit | No |
| product component removable terminal for auxiliary and control circuit | Yes |
| type of electrical connection | |
| • for main current circuit | screw-type terminals |
| • for auxiliary and control circuit | screw-type terminals |
| type of connectable conductor cross-sections | |
| • for main contacts | |
| — solid | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x (1 ... 4 mm ²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| • at AWG cables for main contacts | 1x 12, 2x (20 ... 14) |
| connectable conductor cross-section for main contacts | |
| • solid or stranded | 0.75 ... 4 mm ² |
| • finely stranded with core end processing | 0.5 ... 2.5 mm ² |
| type of connectable conductor cross-sections | |
| • for auxiliary contacts | |
| — solid | 1x (0.5 ... 4 mm ²), 2x (0.5 ... 2.5 mm ²) |
| — finely stranded with core end processing | 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²) |
| • at AWG cables for auxiliary contacts | 2x (20 ... 14) |
| AWG number as coded connectable conductor cross section for main contacts | 20 ... 12 |
| tightening torque with screw-type terminals | 0.8 ... 1.2 N·m |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| fastening method | direct mounting |
| height | 79 mm |
| width | 45 mm |
| depth | 80 mm |
| required spacing | |
| • with side-by-side mounting | |

- forwards 0 mm
- backwards 0 mm
- upwards 0 mm
- downwards 0 mm
- at the side 0 mm
- for grounded parts
 - forwards 0 mm
 - backwards 0 mm
 - upwards 0 mm
 - at the side 6 mm
 - downwards 0 mm
- for live parts
 - forwards 0 mm
 - backwards 0 mm
 - upwards 0 mm
 - downwards 0 mm
 - at the side 6 mm

Ambient conditions

| | |
|---|----------------|
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature | |
| • during operation | -25 ... +60 °C |
| • during storage | -40 ... +80 °C |

Certificates/ approvals

General Product Approval

EMC



[Confirmation](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping

other



[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RR2241-1FW30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RR2241-1FW30>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2241-1FW30>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RR2241-1FW30&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RR2241-1FW30/manual>



